

CCACC ATG GCT CTG CAG ATC CCC AGC CTC CTC GCT TCA GCT GCT GTG GTG CTG ATG GTG CTG AGC AGC CCA AGG
M A L Q I P S L L L S A A V V V L M V L S S P R
Kozak IA^d β CHAIN SIGNAL PEPTIDE
CONSENSUS

ACC TTA AGT ATC TCT CAG GCT GTT CAC GCT GCT CAC GCT GAA ATC AAC GAA GCT GGT CGT
T L S [↑] I S Q A V H A A H A E I N E A G R
..... OVA 323-339 PEPTIDE

GCT AGC GGA GGG GGC GGA AGC GGC GGA GGG GGA AAC TCC GAA AGG // AGC CCC ATC ACT GTG GAG TGG
A S G G G G S G G G G G N S E R // S P I T V E W
..... aa1 IA^d β1-β2 DOMAINS aa189

ACT AGT GGT GGC GGT GGC AGC GGC GGT GGT TCC GGT GGC GGC GGT TCT GGC GGT GGT TCC TCG AGT
T S G G G G S G G G G S G G G G S G G G S S S
..... SINGLE CHAIN LINKER

GAA GAC GAC ATT // CCA GGG CCT TTA TGA
E D D I // P G P L • STOP
..... aa1 IA^d α CHAIN

FIG. 1

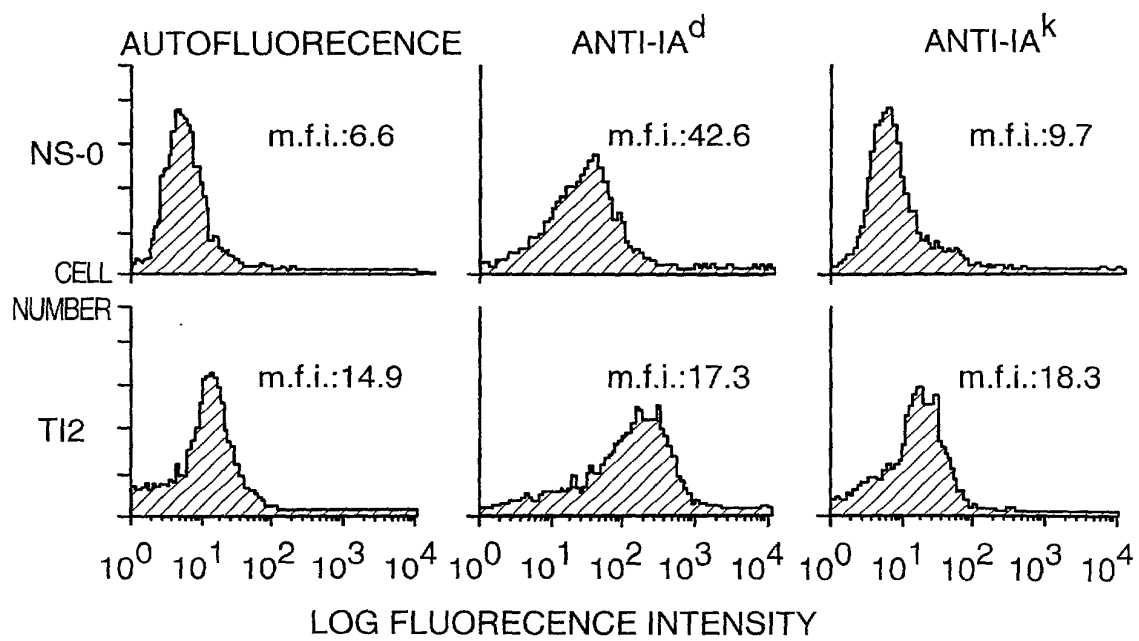


FIG. 2A

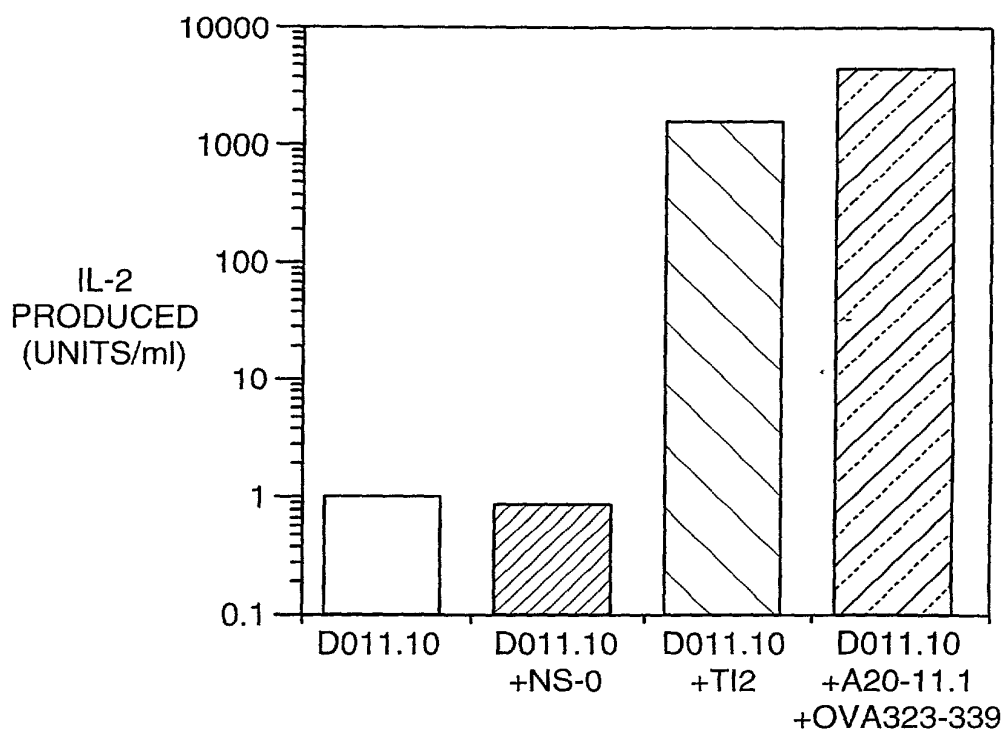


FIG. 2B

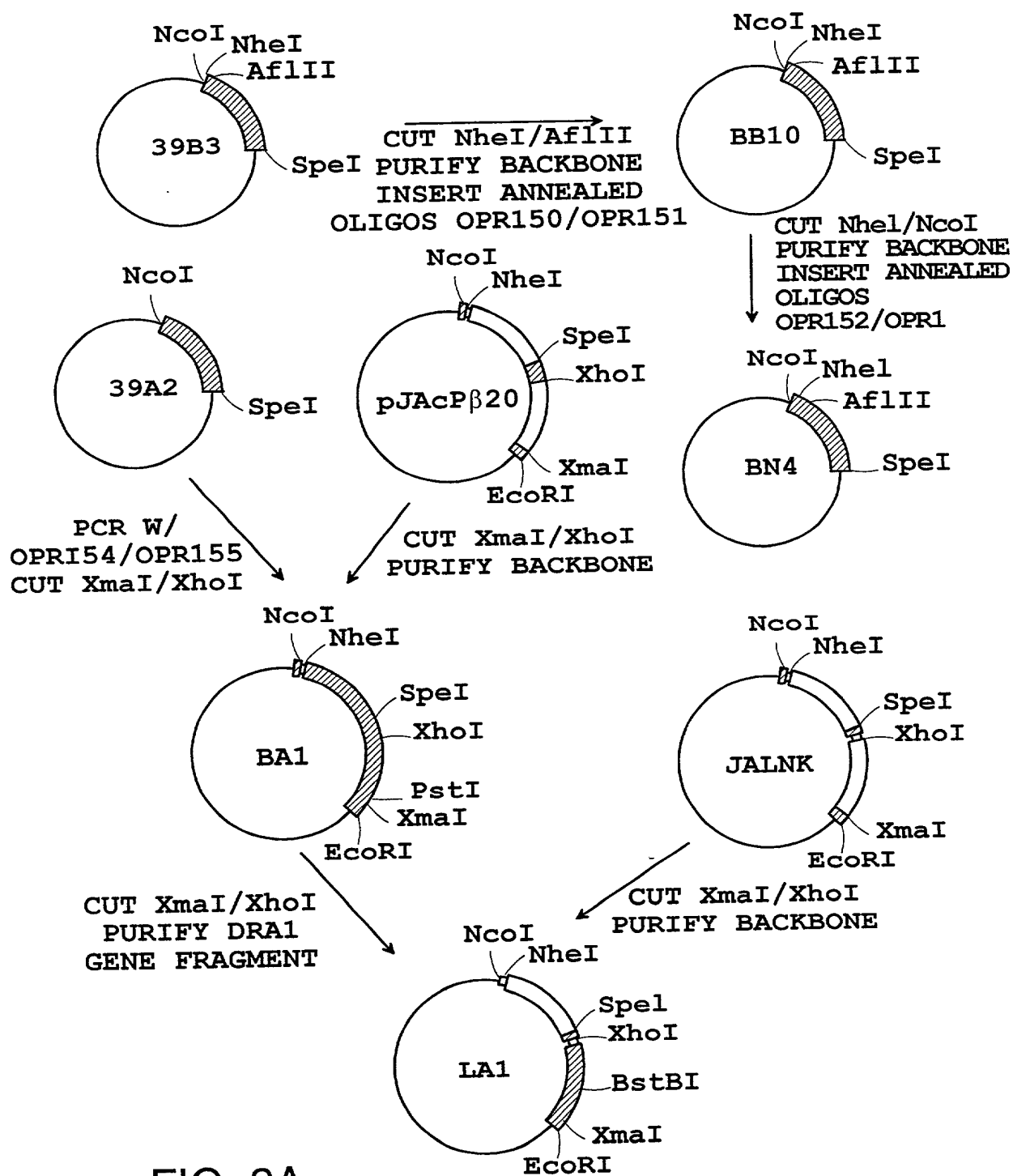


FIG. 3A

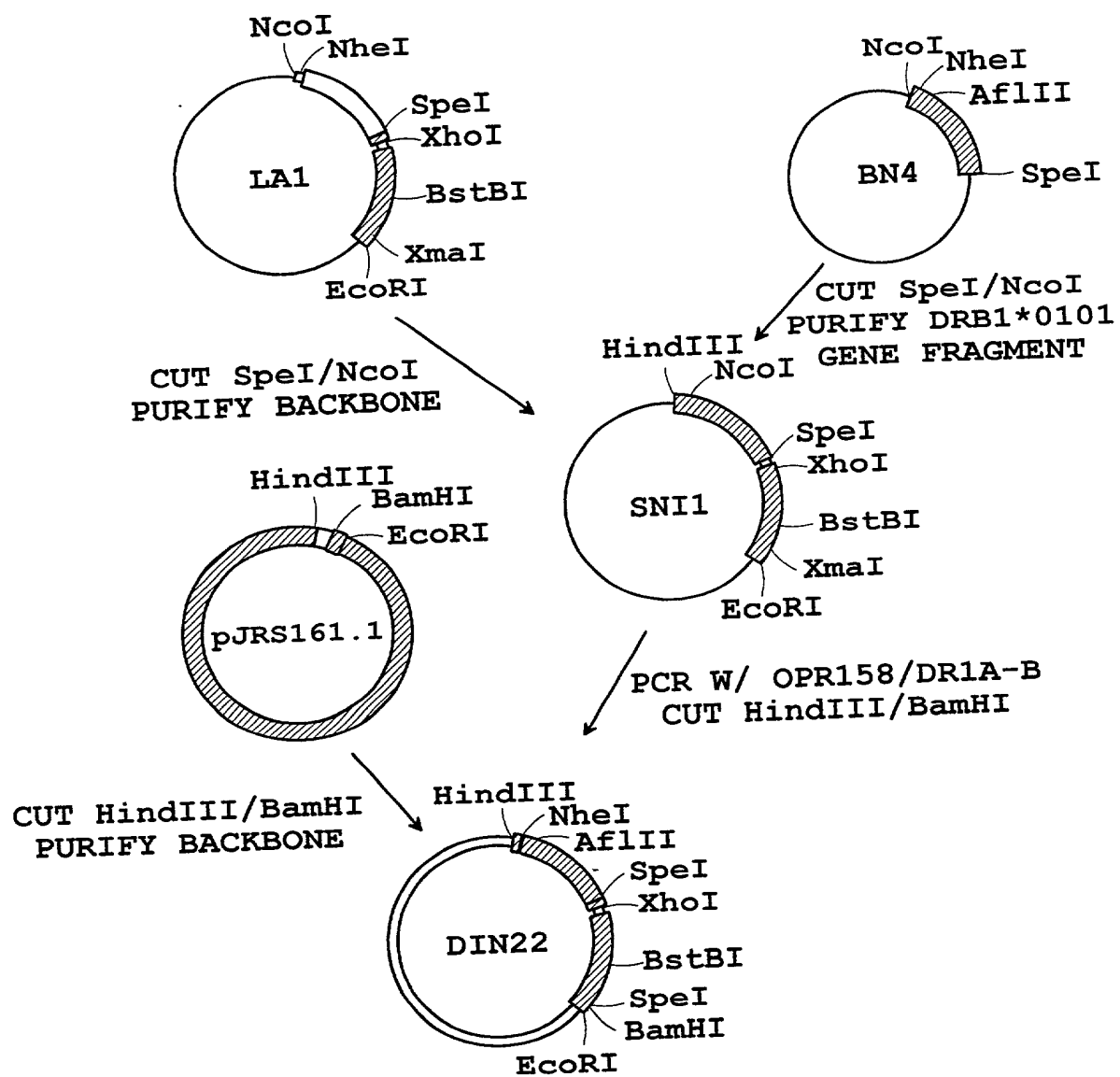


FIG. 3B

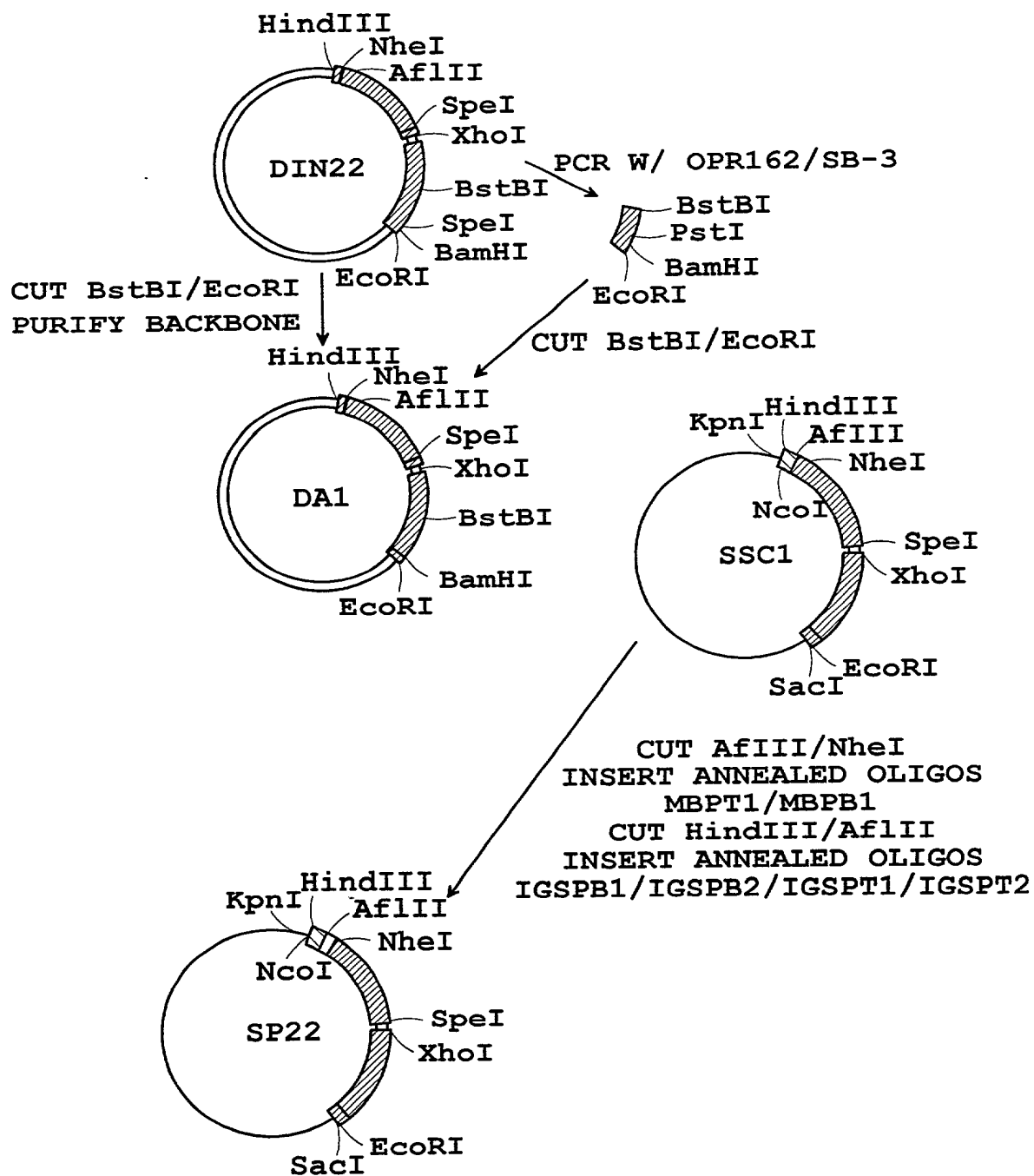


FIG. 3C

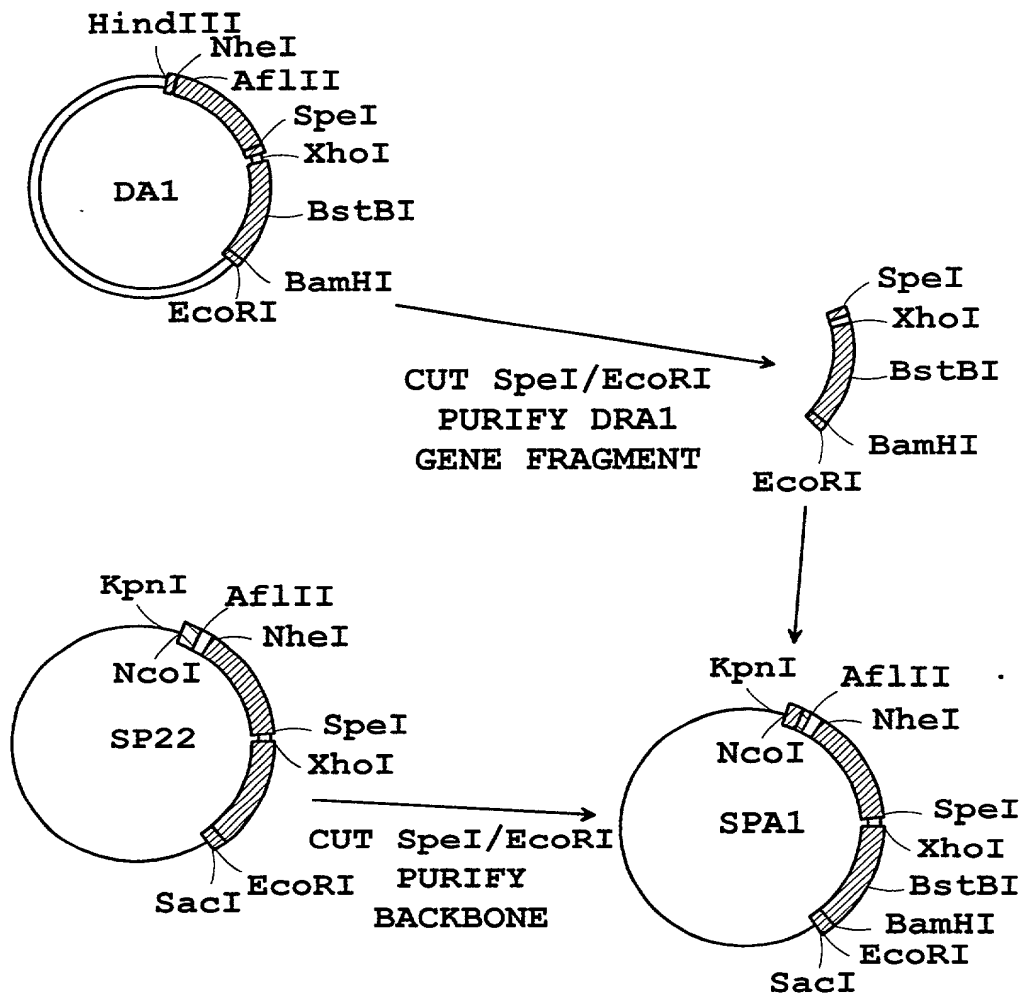


FIG. 3D

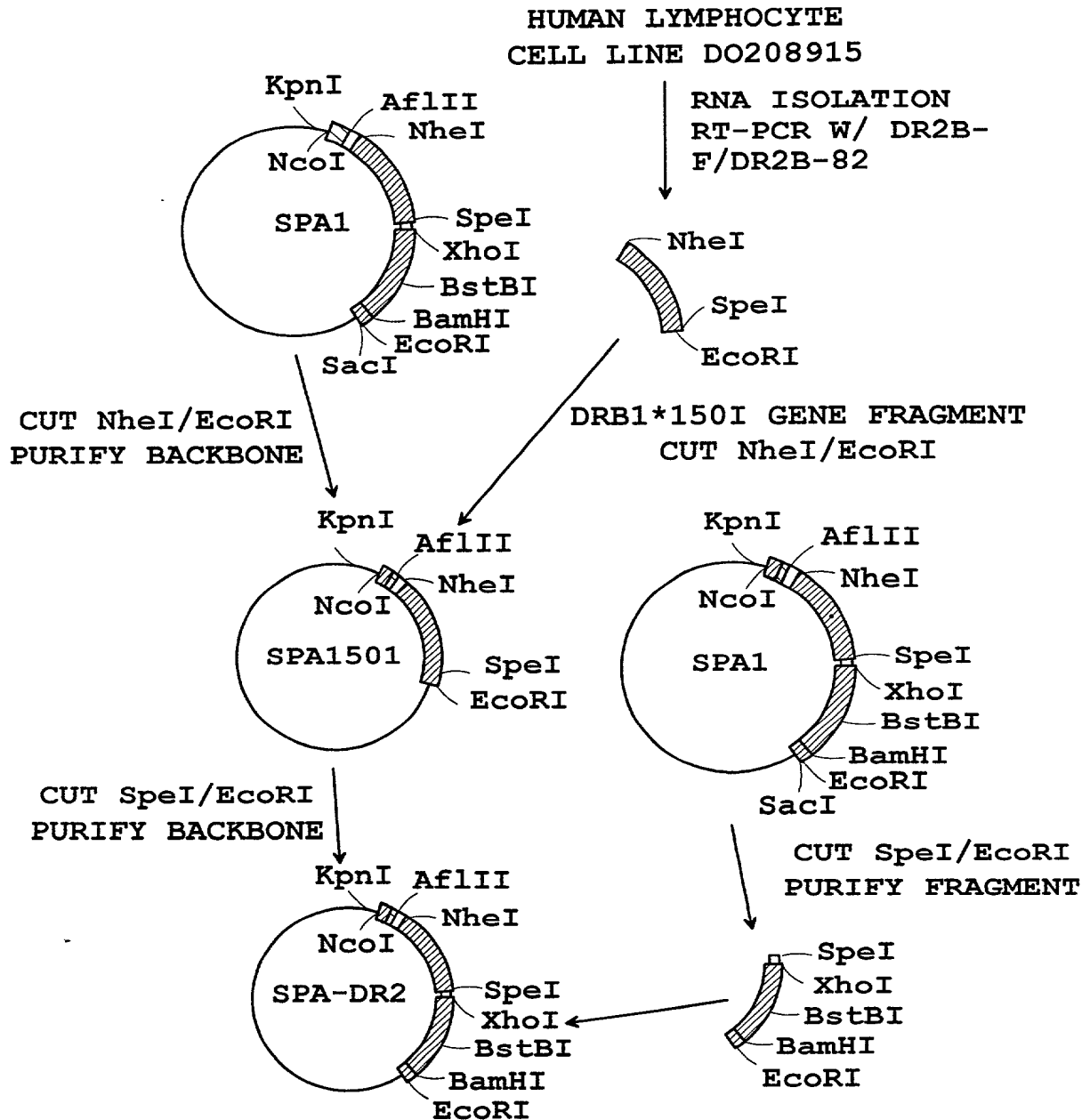


FIG. 3E

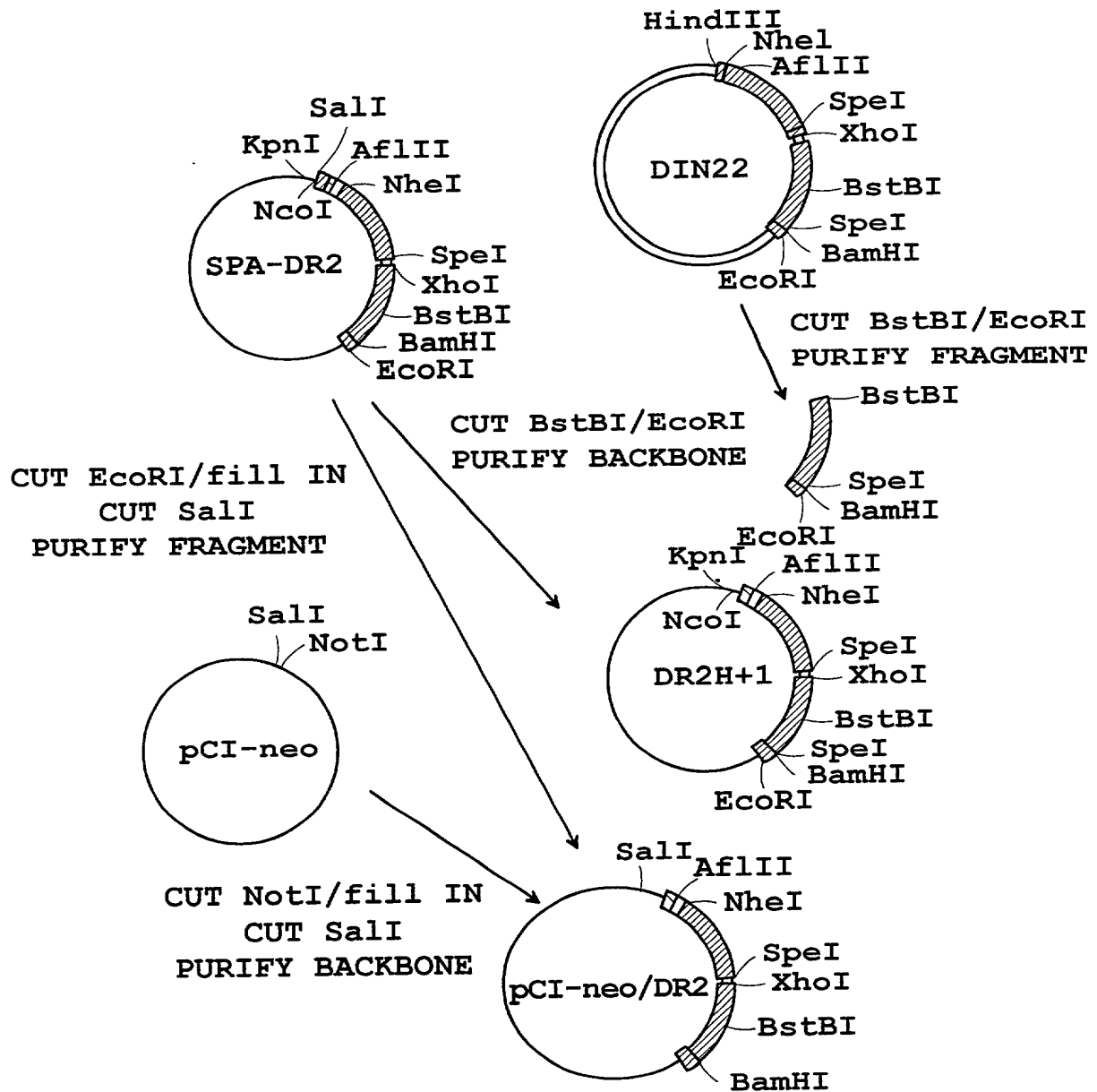


FIG. 3F

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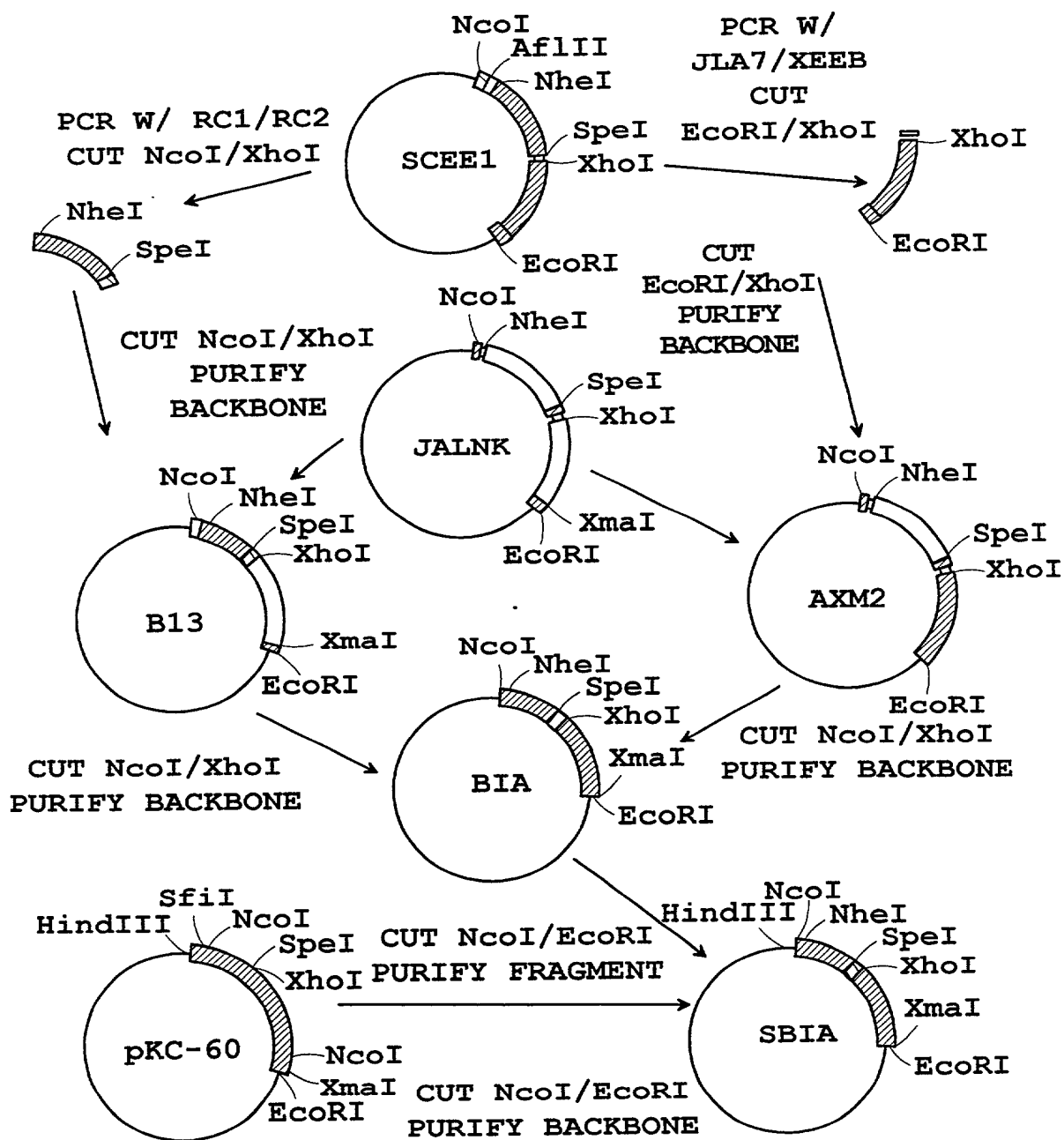


FIG. 3G

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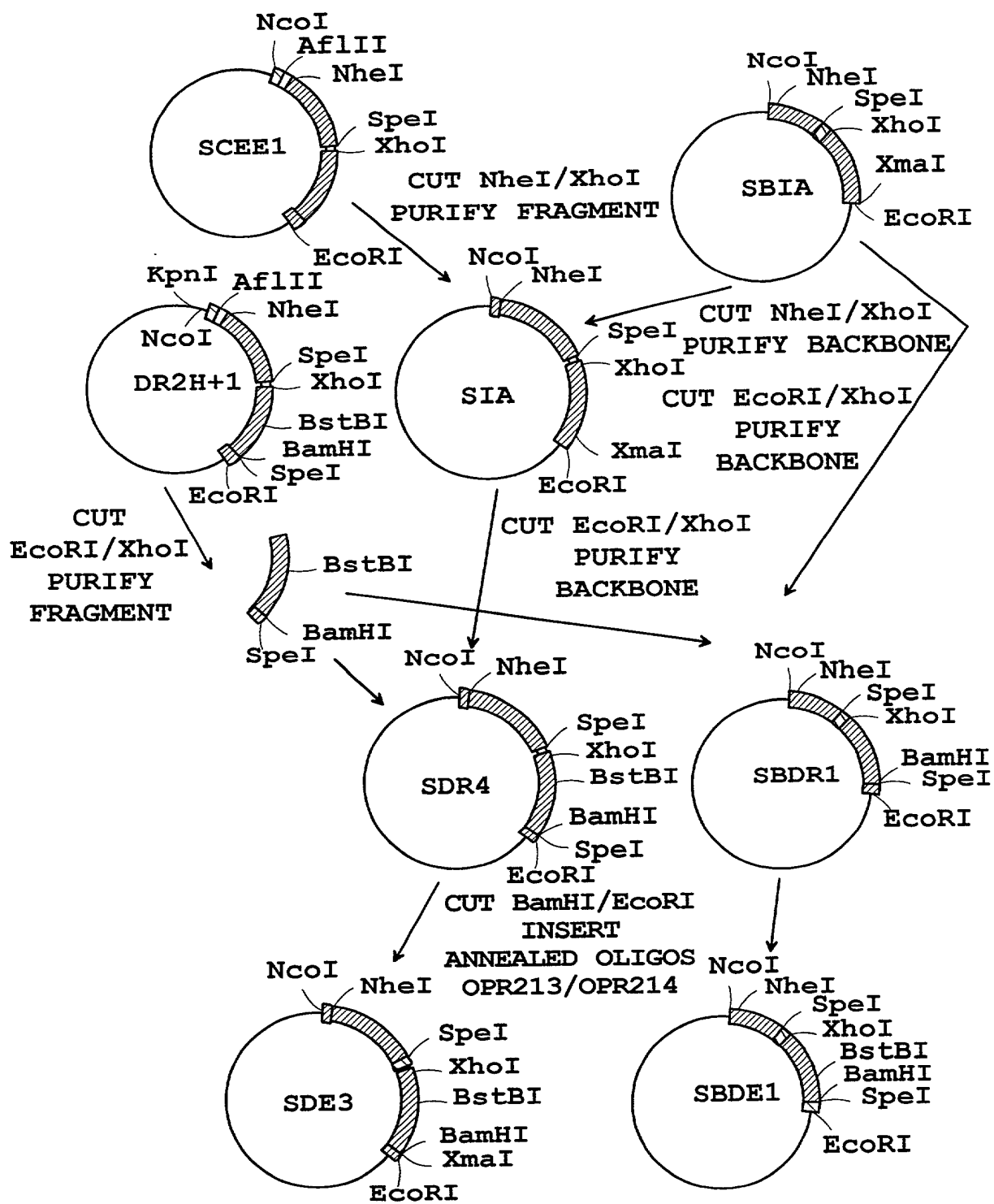


FIG. 3H

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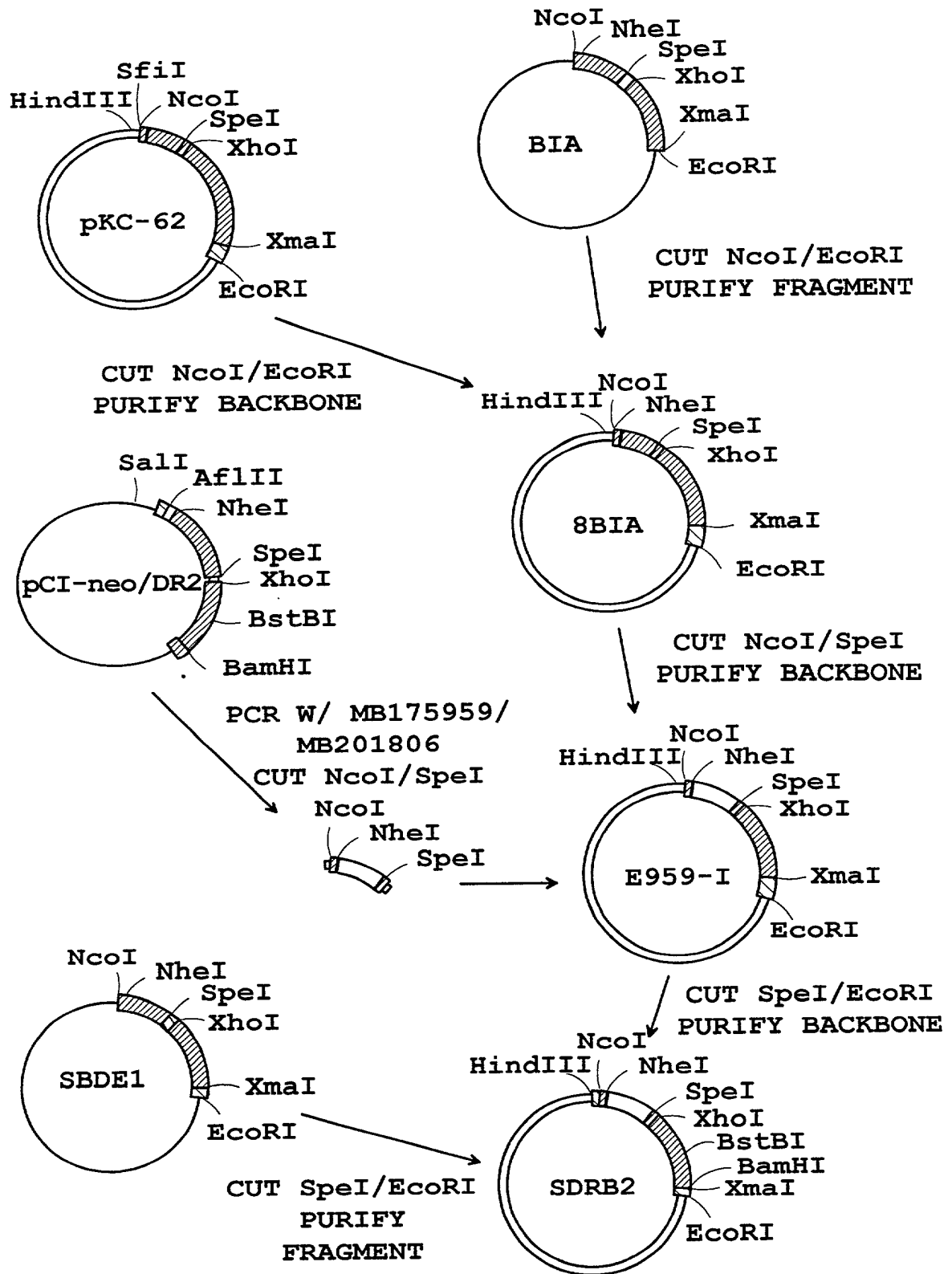


FIG. 3I

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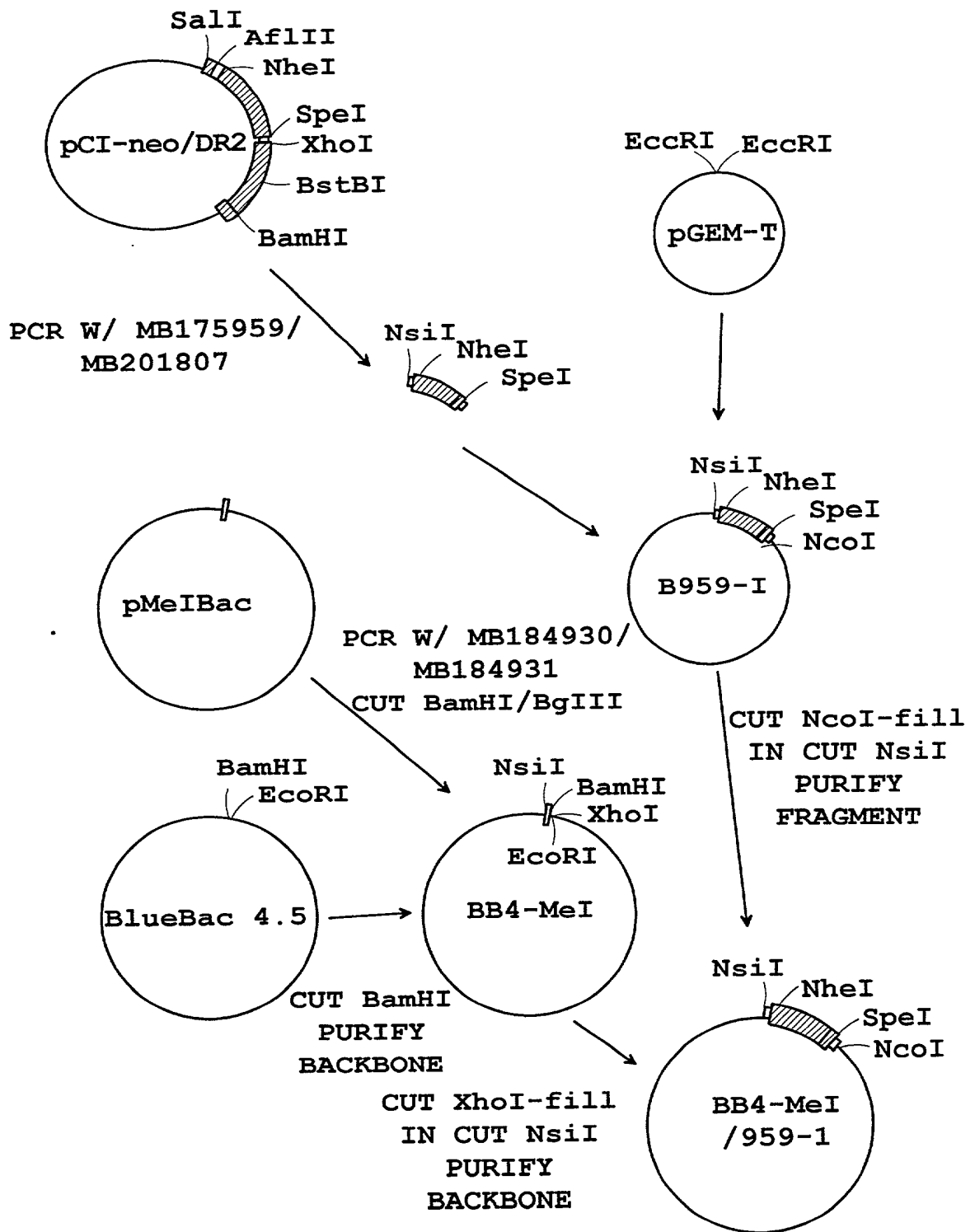


FIG. 3J

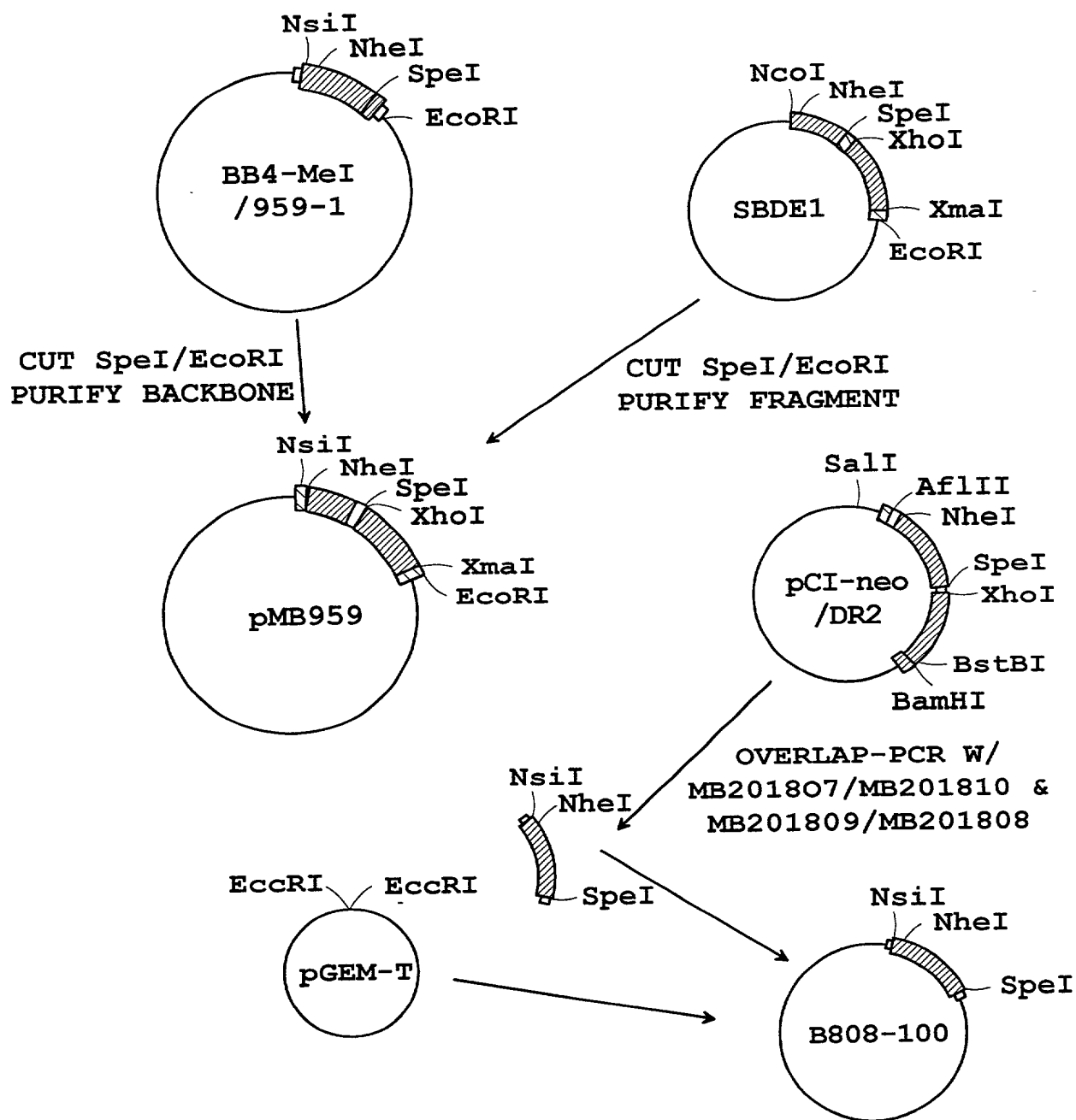


FIG. 3K

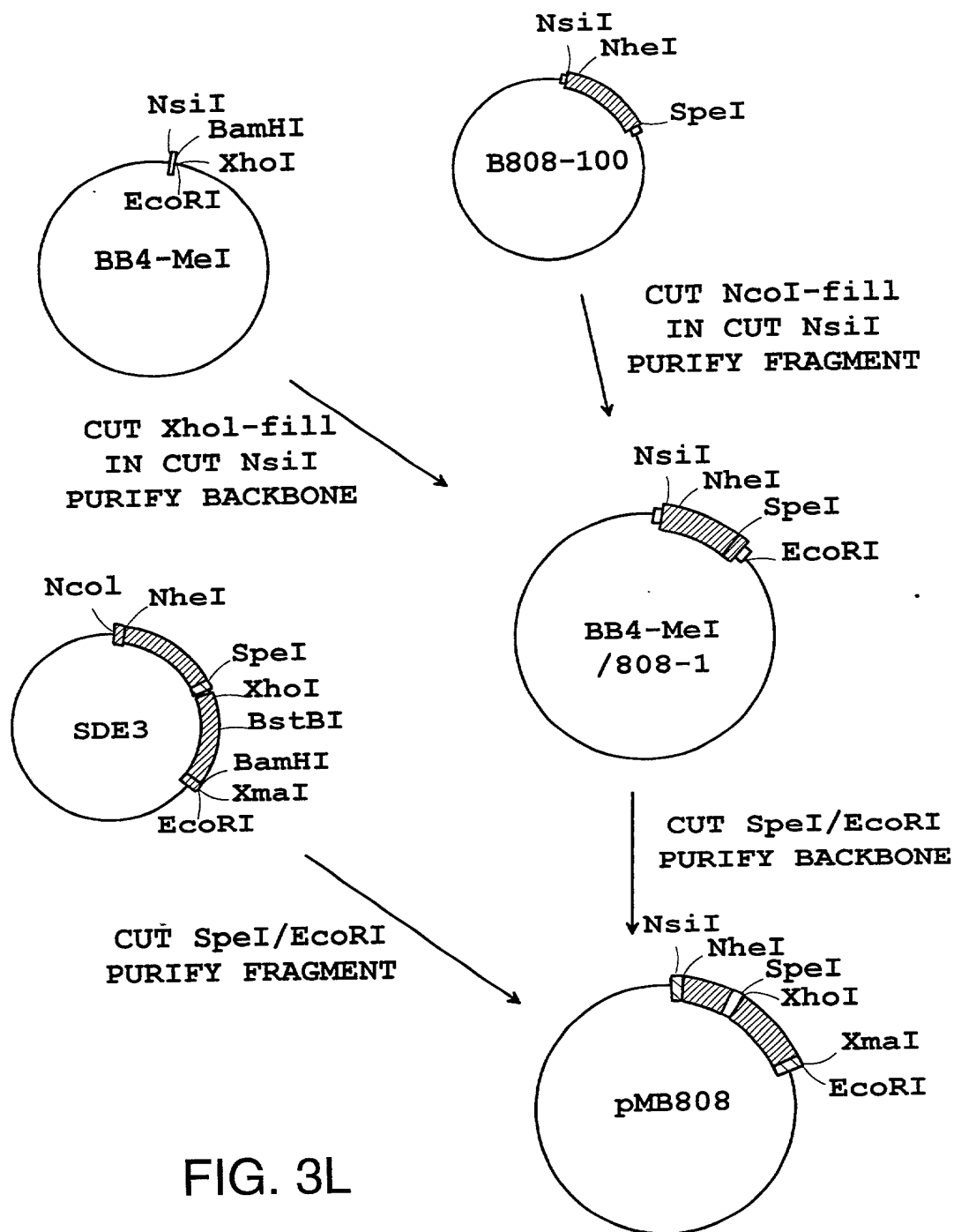


FIG. 3L

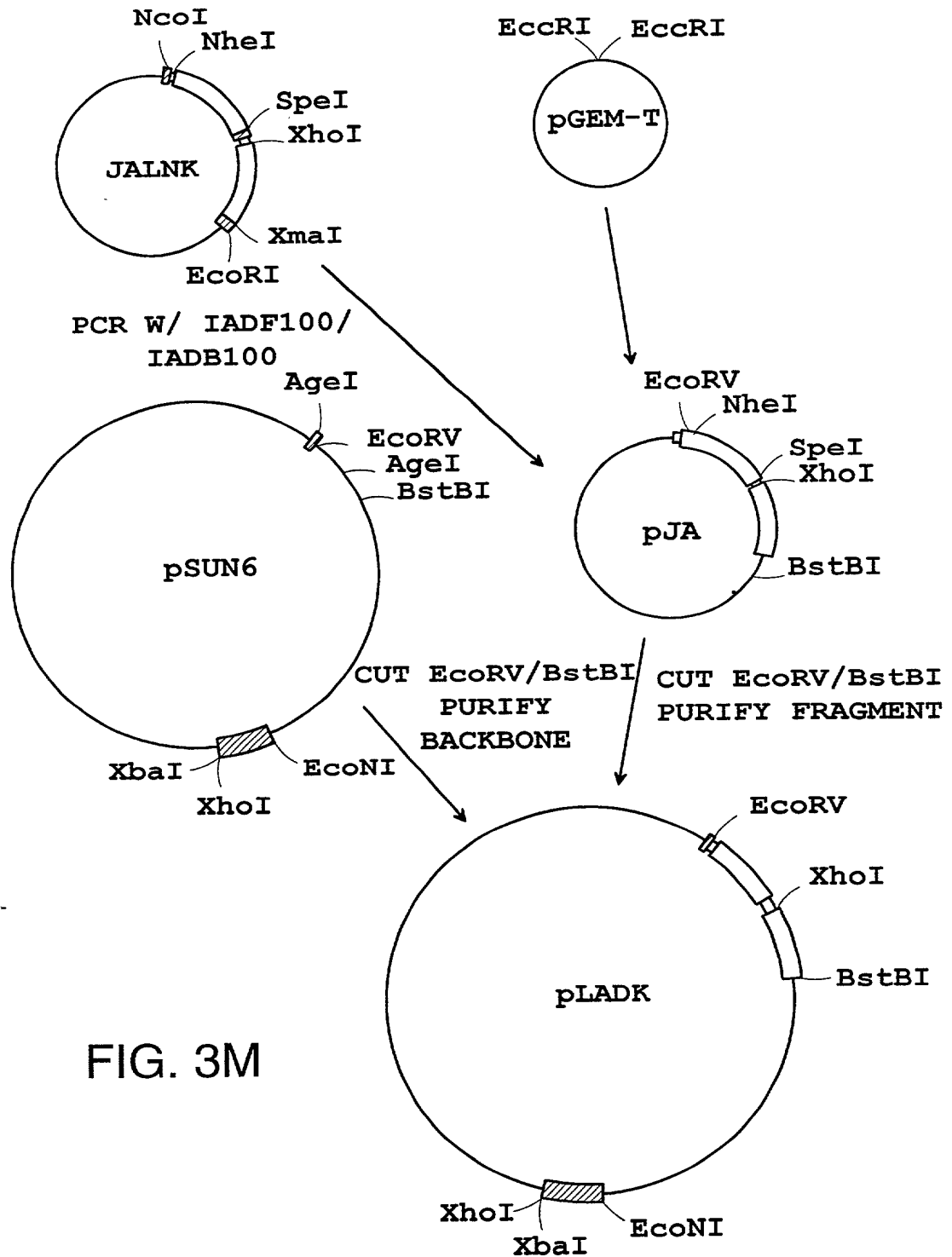


FIG. 3M

09766373.044004

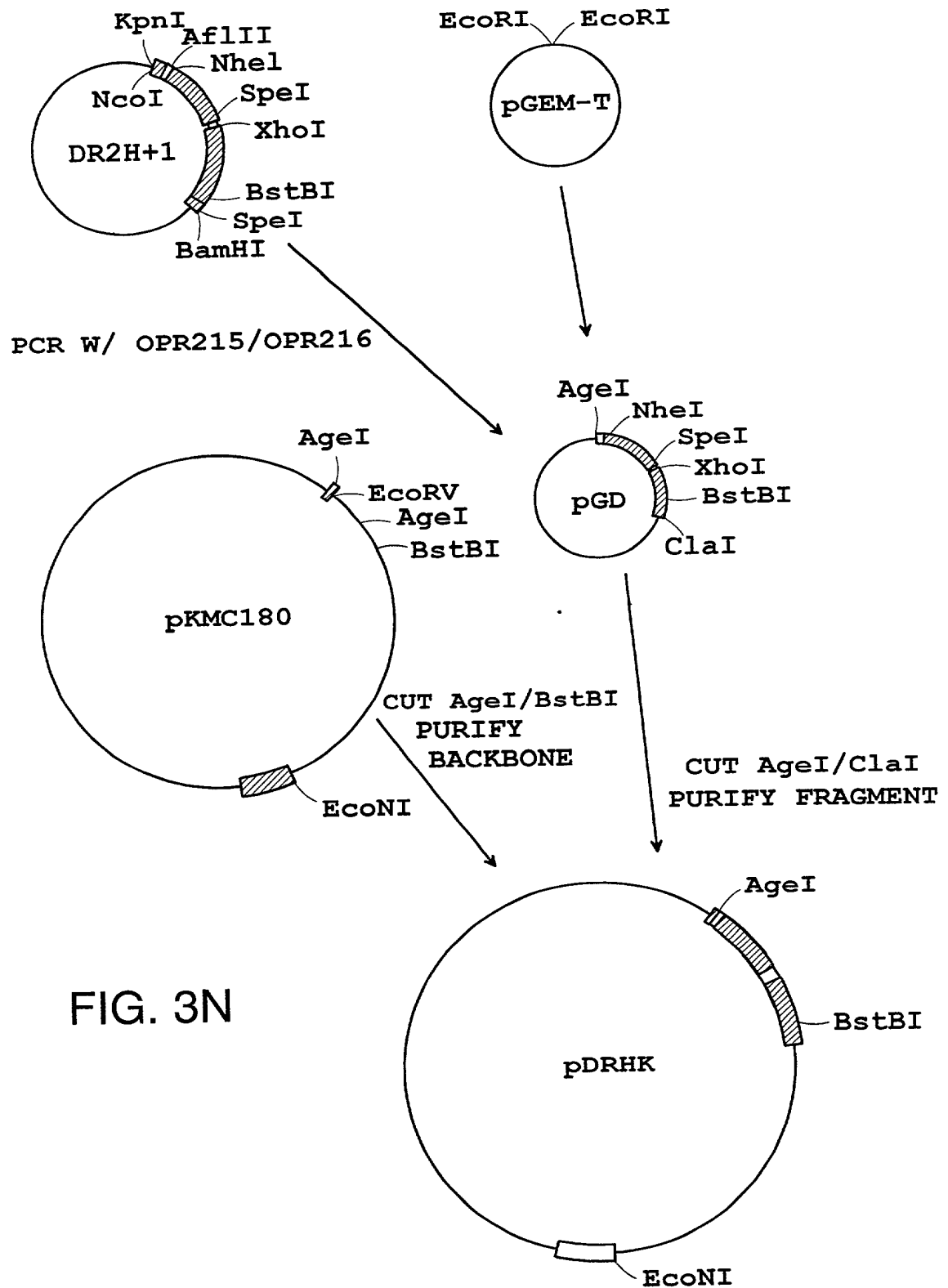


FIG. 3N

sc-1A^d/PEPTIDE FUSION

SP	PEP	L1	IA ^d β1-β2	L2	IA ^d α1-α2
----	-----	----	-----------------------	----	-----------------------

sc-1A^d/PEPTIDE-TAG FUSION

SP	PEP	L1	IA ^d β1-β2	L2	IA ^d α1-α2	EE
----	-----	----	-----------------------	----	-----------------------	----

sc-1A^dTM/PEPTIDE FUSION

SP	PEP	L1	IA ^d β1-β2	L2	IA ^d α1-α2	IA ^d α TM -C _y
----	-----	----	-----------------------	----	-----------------------	---

sc-1A^d/PEPTIDE-C_L FUSION

SP	PEP	L1	IA ^d β1-β2	L2	IA ^d α1-α2	IgG C _L
----	-----	----	-----------------------	----	-----------------------	--------------------

sc-DR2/PEPTIDE-TAG FUSION

SP	PEP	L1	DRB1*1501 β1-β2	L2	DRAI _α 1-α2	EE
----	-----	----	-----------------	----	------------------------	----

sc-DR2-β₂/PEPTIDE FUSION

SP	PEP	L1	DRB1*1501 β1	L2	DRAI _α 1-α2	EE
----	-----	----	--------------	----	------------------------	----

sc-DR2 MOD β₂/PEPTIDE FUSION

SP	PEP	L1	DRB1*1501 β1 MOD β2	L2	DRAI _α 1-α2	EE
----	-----	----	---------------------	----	------------------------	----

sc-DR2/PEPTIDE-C_L FUSION

SP	PEP	L1	DRB1*1501 β1-β2	L2	DRAI _α 1-α2	IgG C _L
----	-----	----	-----------------	----	------------------------	--------------------

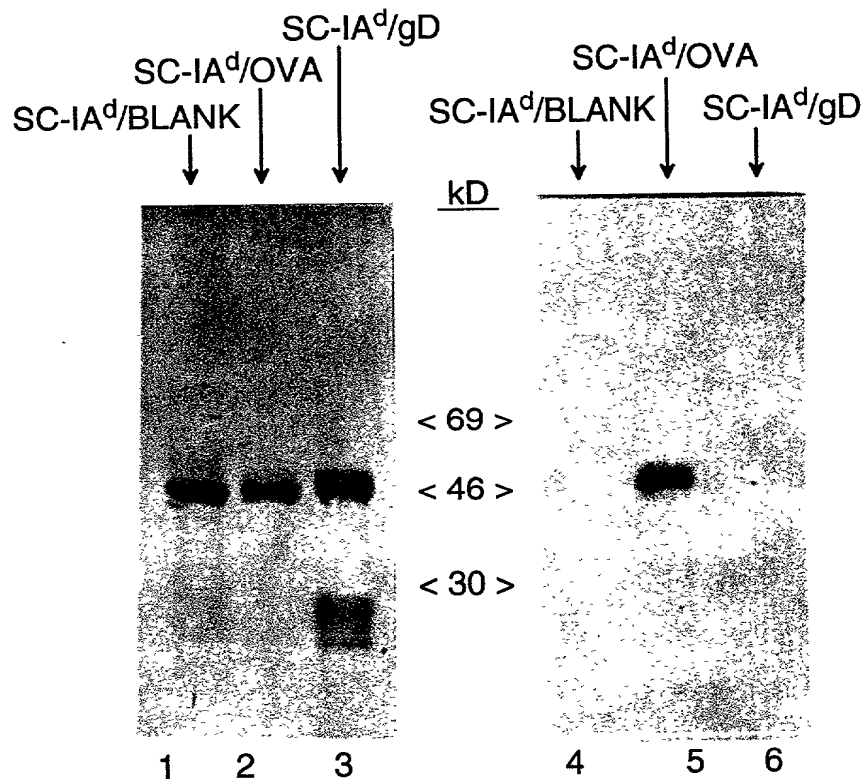


FIG. 5A

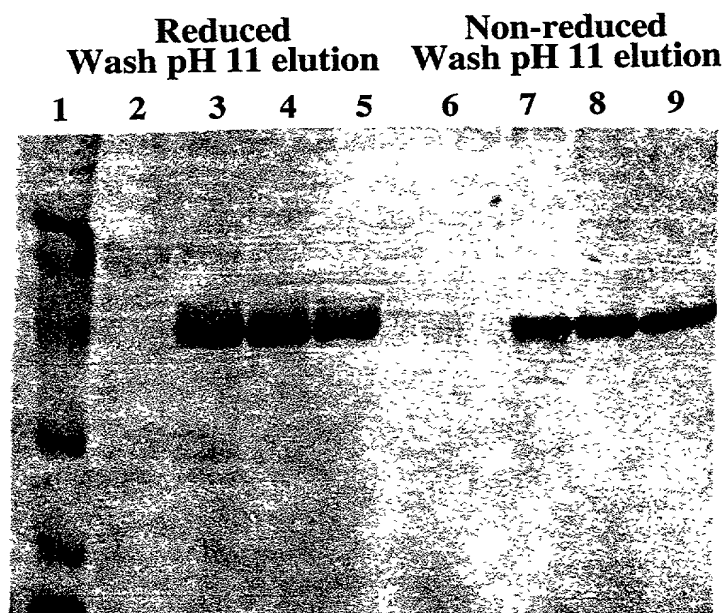


FIG. 5B

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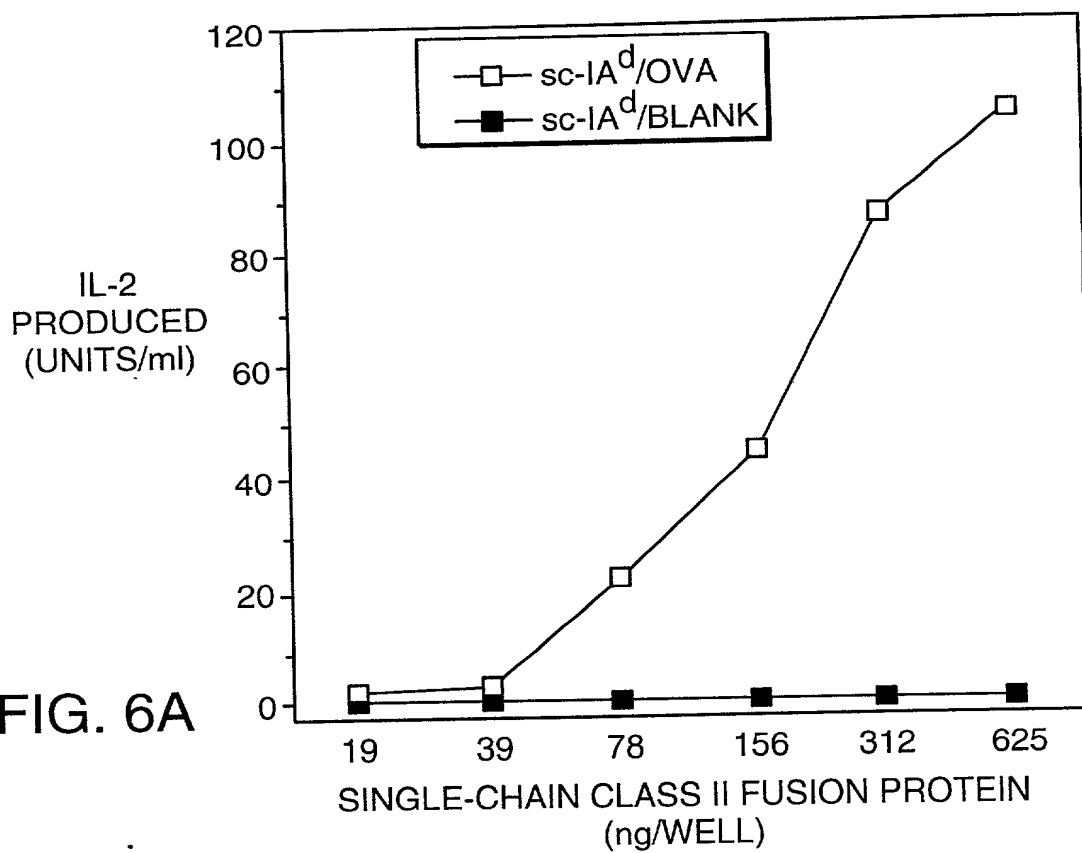


FIG. 6A

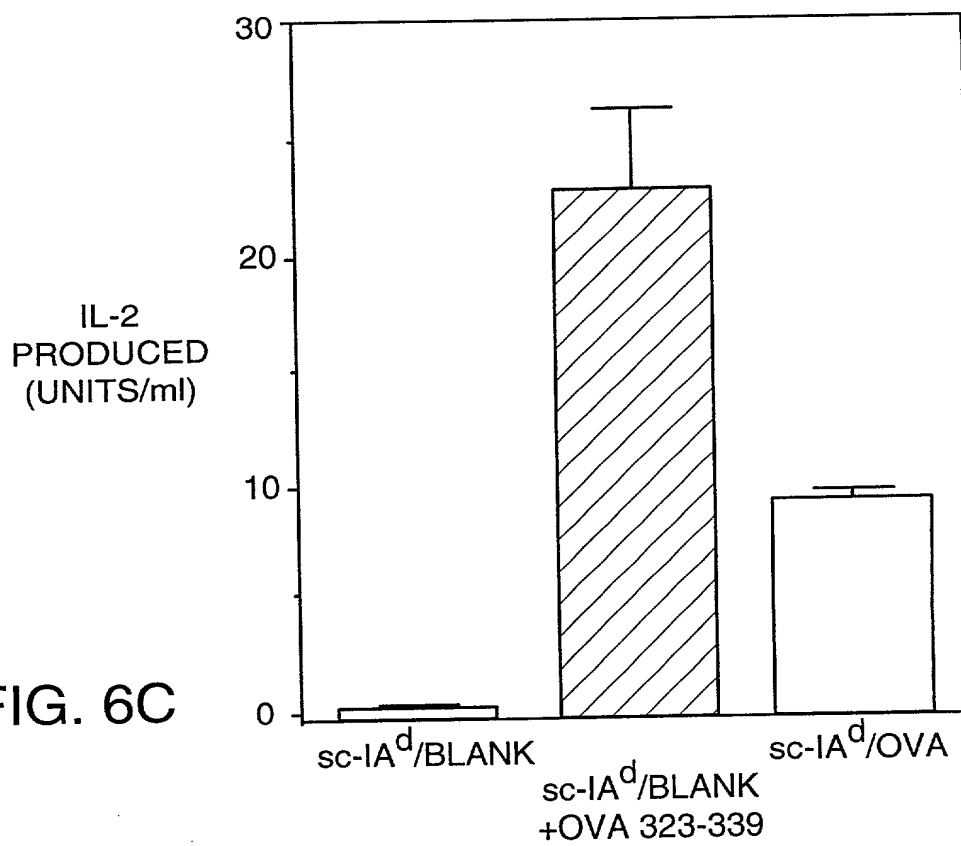


FIG. 6C

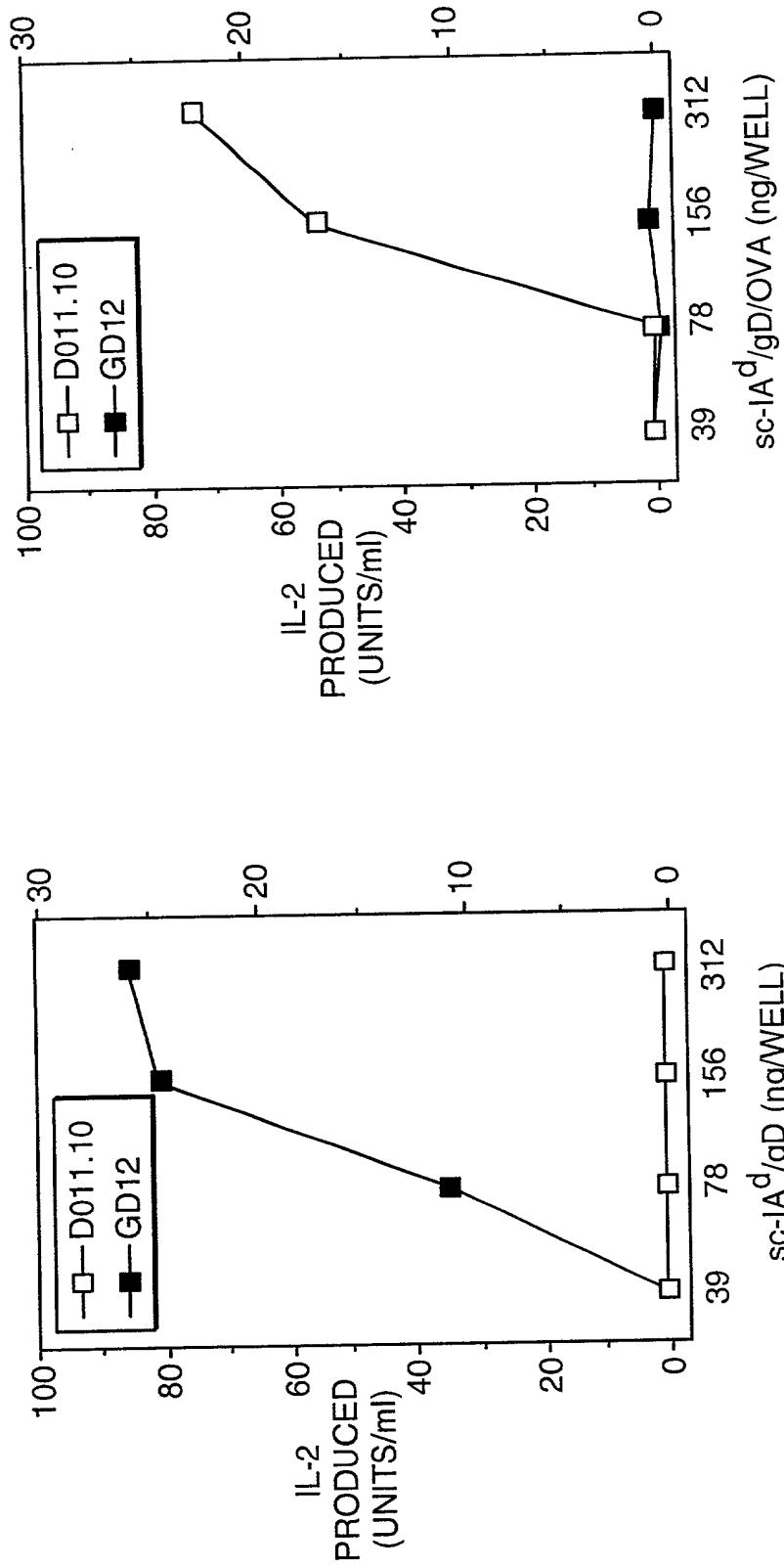


FIG. 6B-1

FIG. 6B-2

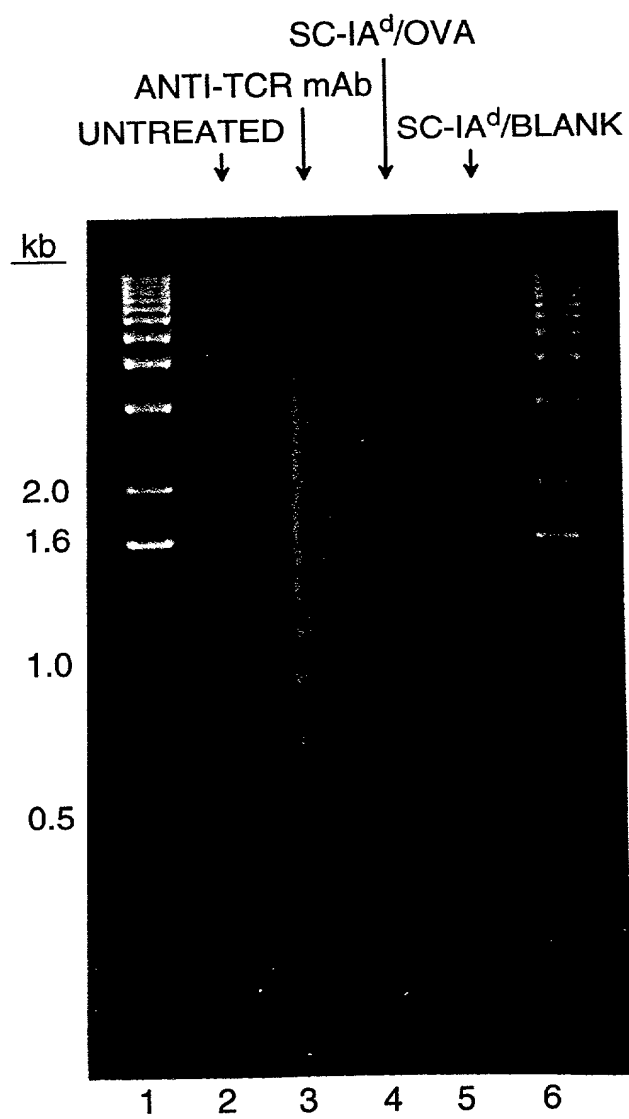


FIG. 7

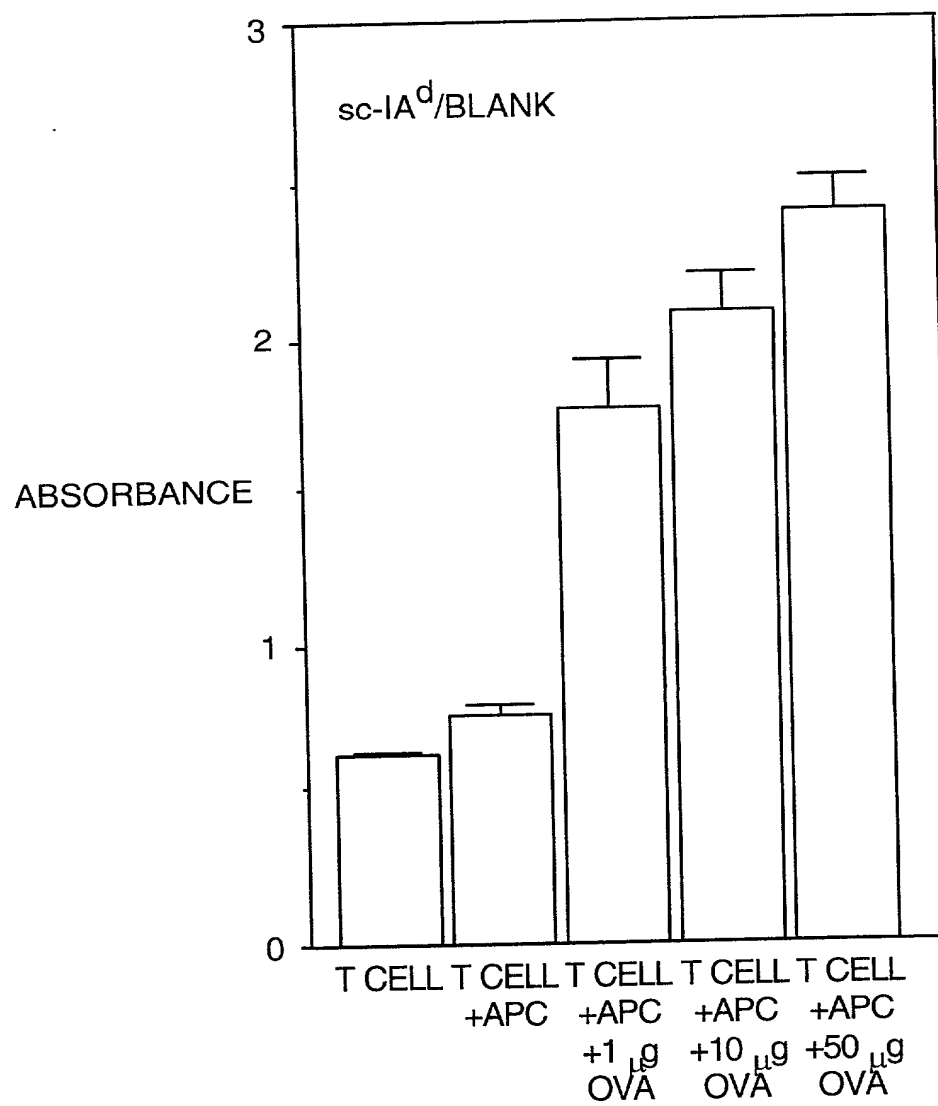


FIG. 8A

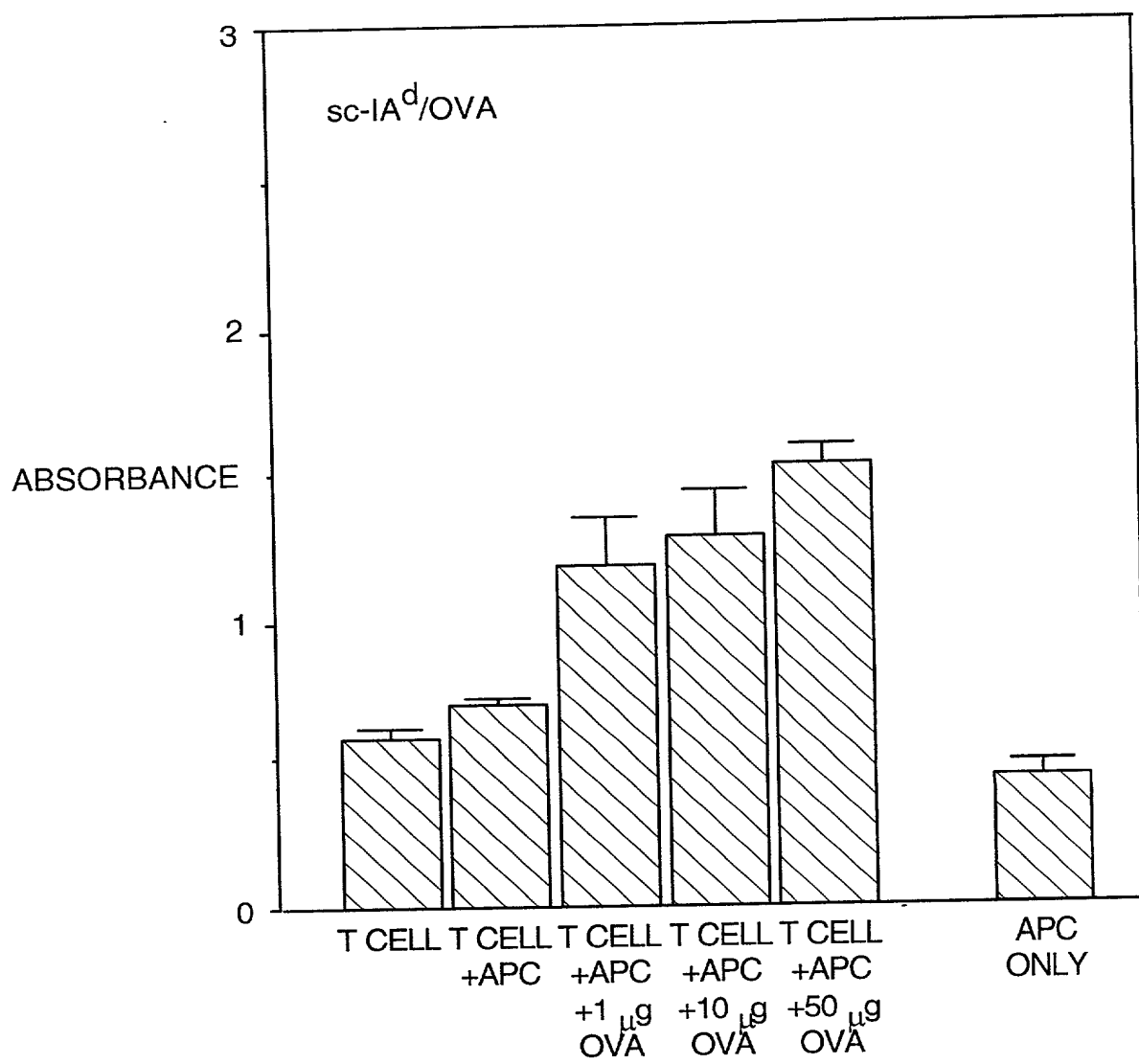
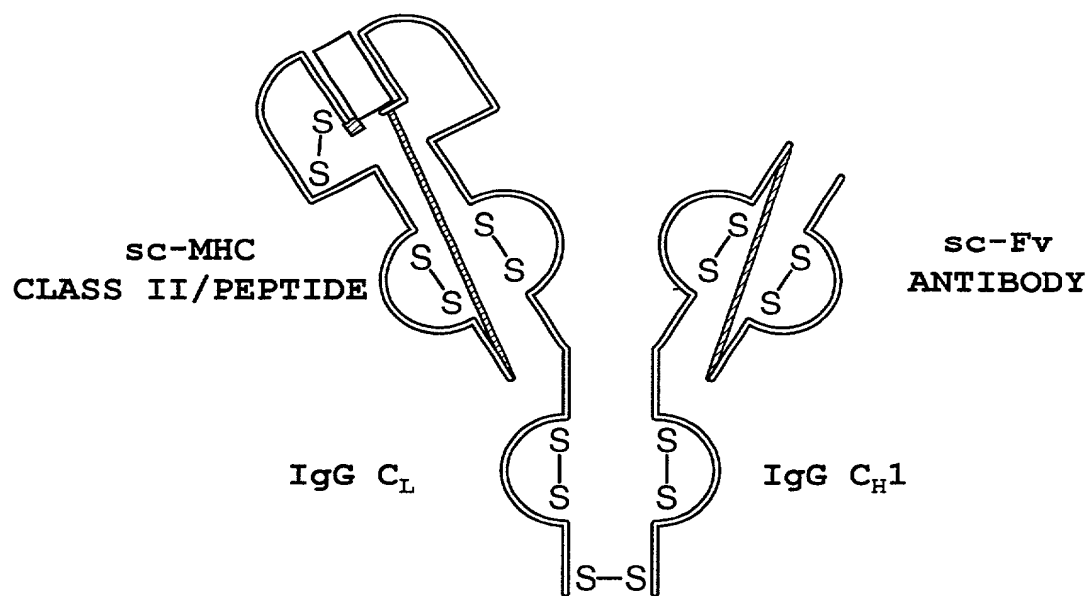
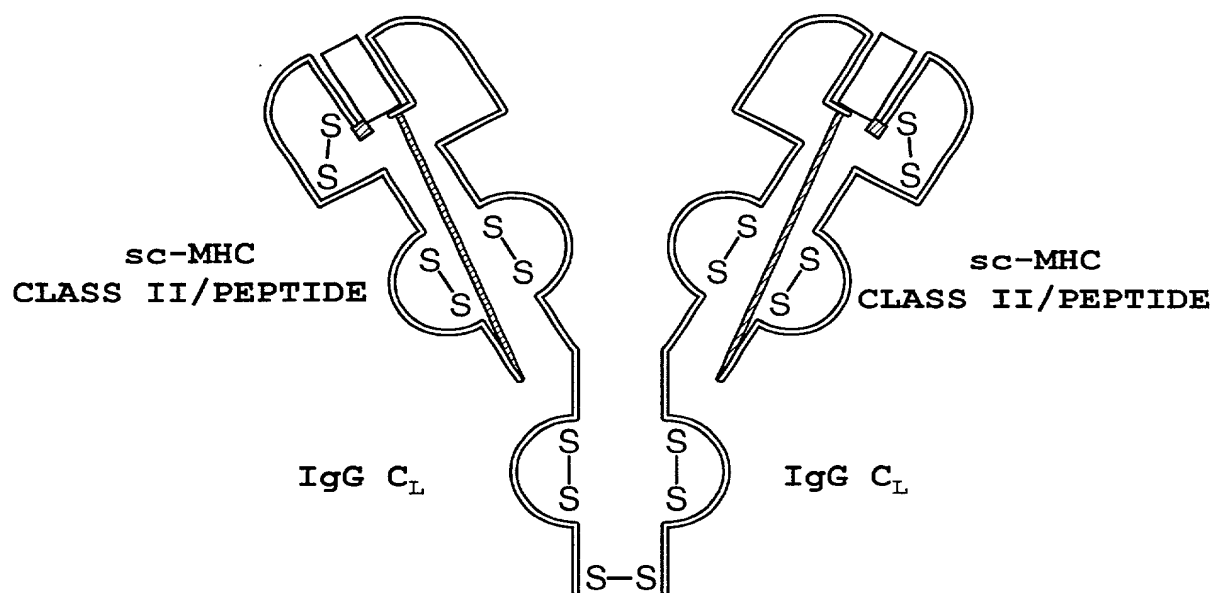


FIG. 8B



CCACCATG	1
OPR132 5'-CCCCCAAGCTTCCCGGGCCACCATGGCTCTGCAGATCCCCAGC-3'	2
OPR133 5'-CCCCCACTTAAGGTCCTTGGGCTGCTCAGCACC-3'	3
OPR102 5'-GGGGGGGCCATGGCCGAAACTCCGAAAGGCATTTTCG-3'	4
OPR104 5'-GCGGCGACTAGTCCACTCCACAGTGATGGGGC-3'	5
OPR100 5'-GGGGGGGCCATGGCCGAAGACGACATTGAGGCCGAC-3'	6
OPR101 5'-GCGCGACTAGTCCAGTGTTTCAGAACCGGCTC-3'.	7
IADF100 5'-GGGGGGGATATCTCTCAGGCTGTTACGCTG-3'	8
IADB100 5'-GGGGGGTTCGAAAAGTGTA CTTACGGGGGGCTGGAATCTCAGGTTC-3'	9
OPR145 5'-GGGGGGCTCGAGTATCAAAGAAGAACATGTGATCATC-3'	10
DR1A-B 5'-GCGGCGGGATCCGTTCTCTGTAGTCTCTGGGAGAGG-3'	11
OPR203000 5'-GATCCGAGGAAGAAGAGTACATGCCCATGGAACCCGGGTGAG-3'	12
OPR203001 5'-AATTCTCACCCGGGTTCCATCGGCATGTACTCTTCTCCTCG-3'	13
DR2B-F 5'-CCCCCGCTAGCGGAGGGGGCGGAAGCGGCGGAGGGGGGGACA CCCGACCACGTTTCCTGTGGCAGCCTAAGAGG-3'	14
DR2B-B2 5'-CCCCCGAATTCCCCACTAGTCCATTCCACTGTGAGAGGGCTTGTC AC-3'	15
MB201806 5'-GGGGGGGCCATGGCCTACGACGAGAACCCCGTGGTG-3'	16
MB175959 5'-GGGGGGACTAGTTCGCCGCTGCACTGTGAAGC-3'	17
MB201807 5'-GGGGGGTATGCATACGACGAGAACCCCGTGGTG-3'	18
MB201808 5'-GGGGGGACTAGTTCCACTTCGAGGAACTGTTTCC-3'	19
MB201809 5'-CCTCCTGGTCTCCTCTGTGAGTGG-3'	20
MB201810 5'-CCACTCACAGAGGAGACCAGGAGG-3'	21
OPR 215 5'-CCC CCC ACC GGT TAC GAC AAC CCC GTG GTG-3'	22
OPR 216 CCC CCC ATC GAT AAG TGT ACT TAC GTG GGA GAG GGC TTG GAG CAT-3'	23

FIG. 10A

OVA 323-399 ISQAVHAAHAEINEAGR	26
Gd-246-261 APYSTLLPPELSETP	27
MBP (83-102) Y83 YDENPVVHFFKNIVTPRTPP	28
14 amino acid linker TSGGGGSGGGGSSS	29
EE TAG EEEEYMPMEPG	30
24 amino acid linker TSGGGGSGGGGSGGGGSGGGGSSS	31
MBP (S4-102) DENPVVHFFKNIVTPRTPP	32

FIG. 10B